

Knowre Math: **Grade 3** Curriculum

Chapter 1 Place Value

Lesson	Topic	NGSSS
1-1 Models of Numbers Less Than 10,000	A) Using Base Ten Blocks to Model Numbers	MAFS.2.NBT.1.3
1-2 Place Values Less Than 1,000,000	A) Place Values Less Than Millions	MAFS.2.NBT.1.3
	B) Expanded and Standard Form of Numbers	
1-3 Reading and Writing Numbers Less Than 10,000	A) Reading and Writing Three-Digit Numbers	MAFS.4.NBT.1.2
	B) Reading and Writing Four-Digit Numbers	
1-4 Comparing and Ordering Numbers Less Than 10,000	A) Place Values to Compare Numbers Less Than 1,000	MAFS.4.NBT.1.2
	B) Comparing Numbers Less Than 1,000	
	C) Place Values to Compare Numbers Less Than 10,000	
	D) Comparing Numbers Less Than 10,000	
	E) Ordering Numbers Less Than 10,000	
1-5 Rounding	A) Rounding Numbers to the Nearest Ten, Hundred, and Thousand on a Number Line	MAFS.3.NBT.1.1
	B) Rounding Numbers to the Nearest Ten, Hundred, and Thousand	

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Chapter 2 Adding and Subtracting

Lesson	Topic	NGSSS
2-1 Using Models to Add	A) Base Ten Blocks to Add when the Sum is Less Than 1,000	MAFS.3.NBT.1.2
	B) Place Value Charts to Add when the Sum is Less Than 1000	
2-2 Using the Standard Algorithm to Add	A) Vertical Addition of Two Numbers with Two or Fewer Digits	MAFS.3.OA.4.8, MAFS.3.NBT.1.2
	B) Vertical Addition of Two Numbers with Three or Fewer Digits	
	C) Vertical Addition of Two Numbers with Four or Fewer Digits	
2-3 Using Models to Subtract	A) Base Ten Blocks to Subtract when the Minuend is Less Than 1,000	MAFS.3.NBT.1.2
	B) Place Value Charts to Subtract when the Minuend is Less Than 10,000	
	C) Place Value Charts to Subtract when Regrouping Over Zero	
2-4 Using the Standard Algorithm to Subtract	A) Vertical Subtraction without Regrouping when the Minuend is Less Than 10,000	MAFS.3.OA.4.8, MAFS.3.NBT.1.2
	B) Vertical Subtraction with Regrouping when the Minuend is Less Than 10,000	
	C) Vertical Subtraction with Regrouping Over Zero when the Minuend is Less Than 10,000	
2-5 Horizontal Addition and Subtraction	A) Horizontal Addition of Two Numbers	MAFS.3.OA.4.8, MAFS.3.NBT.1.2
	B) Horizontal Subtraction of Two Numbers	
2-6 Addition and Subtraction Relationships	A) Horizontal Addition and Subtraction of Three or More Numbers	MAFS.3.OA.4.8, MAFS.3.NBT.1.2
	B) Relationships Between Addition and Subtraction Sentences	
	C) Missing Numbers in Addition and Subtraction Sentences	
2-7 Estimating Sums and Differences	A) Estimating Sums	MAFS.3.OA.4.8,
	B) Estimating Differences	

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Chapter 3 Modeling Multiplication

Lesson	Topic	NGSSS
3-1 Equal Groups	A) Describing Equal Groups	
	B) Writing Repeated Addition Expressions from Equal Groups	
	C) Finding the Total Number of Objects in Equal Groups	
3-2 The Meaning of Multiplication	A) Multiplication as Equal Groups	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.3.7
	B) Repeated Addition and Multiplication Expressions	
	C) Equal Groups and Multiplication Expressions	
3-3 Multiplication with Equal Groups and Addends	A) Parts of Multiplication Sentences	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.1.4, MAFS.3.OA.3.7
	B) Repeated Addition to Multiply	
	C) Equal Groups to Multiply	
3-4 Multiplication with Arrays	A) Arrays and Multiplication Sentences	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.1.4, MAFS.3.OA.3.7
	B) Arrays to Multiply	
3-5 Multiplication with Number Lines and Hundreds Charts	A) Number Lines and Multiplication Sentences	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.1.4, MAFS.3.OA.3.7
	B) Number Lines to Multiply	
	C) Hundreds Charts to Multiply	
3-6 The Order of Factors in Multiplication	A) Commutative Property of Multiplication	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.2.5, MAFS.3.OA.3.7

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Chapter 4 Multiplication Fluency

Lesson	Topic	NGSSS
4-1 Multiplying by Zero and One	A) Strategies to Multiply by One	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Strategies to Multiply by Zero	
4-2 Multiplying by Two and Four	A) Strategies to Multiply by Two	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Strategies to Multiply by Four	
4-3 Multiplying by Five and Ten	A) Strategies to Multiply by Five	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Strategies to Multiply by Ten	
4-4 Multiplying by Three and Six	A) Strategies to Multiply by Three	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Strategies to Multiply by Six	
4-5 Multiplying by Seven, Eight, and Nine	A) Strategies to Multiply by Seven	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Strategies to Multiply by Eight	
	C) Strategies to Multiply by Nine	
4-6 Basic Multiplication Facts	A) Single Digit Multiplication	MAFS.3.OA.1.1, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Multiplying Ten and a One-Digit Number	

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Chapter 5 Modeling Division

Lesson	Topic	NGSSS
5-1 Equal Groups and Division	A) Sharing Objects into Equal Groups	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.3.7
	B) Division as Equal Groups	
5-2 The Meaning of Division	A) Equal Groups and Division Expressions	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.1.4, MAFS.3.OA.3.7
	B) Parts of Division Sentences	
	C) Equal Groups to Divide	
5-3 Division with Arrays	A) Arrays and Division Sentences	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.1.4, MAFS.3.OA.3.7
	B) Arrays to Divide	
5-4 Division with Number Lines	A) Number Lines and Division Sentences	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.1.4, MAFS.3.OA.3.7
	B) Number Lines to Divide	
5-5 Division as Repeated Subtraction	A) Division as Repeated Subtraction	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.1.4, MAFS.3.OA.3.7
	B) Repeated Subtraction and Division Sentences	
	C) Repeated Subtraction to Divide	

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Chapter 6 Division Fluency

Lesson	Topic	NGSSS
6-1 Dividing by One and Two	A) Strategies to Divide by One	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Strategies to Divide by Two	
6-2 Dividing by Five and Ten	A) Strategies to Divide by Five	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Strategies to Divide by Ten	
6-3 Dividing by Three and Four	A) Strategies to Divide by Three	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Strategies to Divide by Four	
6-4 Dividing by Six and Seven	A) Strategies to Divide by Six	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Strategies to Divide by Seven	
6-5 Dividing by Eight and Nine	A) Strategies to Divide by Eight	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Strategies to Divide by Nine	
6-6 Basic Division Facts	A) One-Digit Quotients When Dividing by One-Digit Numbers	MAFS.3.OA.1.2, MAFS.3.OA.1.3, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) One-Digit Quotients When Dividing by Ten	

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Chapter 7 Mixed Operations and Patterns

Lesson	Topic	NGSSS
7-1 Multiplication and Division Relationships	A) Relationships Between Multiplication and Division Sentences	MAFS.3.OA.1.4, MAFS.3.OA.2.5, MAFS.3.OA.2.6, MAFS.3.OA.4.8
	B) Missing Numbers in Multiplication and Division Sentences	
7-2 Expressions and Equations	A) Addition and Subtraction Expressions	MAFS.3.OA.1.1, MAFS.3.OA.4.8
	B) Multiplication and Division Expressions	
	C) Expressions with More Than One Operation	
7-3 Mixed Operations	A) Multiplying Three or More Numbers	MAFS.3.OA.2.5, MAFS.3.OA.3.7, MAFS.3.OA.4.8
	B) Dividing Three or More Numbers	
	C) Expressions with More Than One Operation	
7-4 Patterns	A) Repeating Patterns	MAFS.3.OA.4.9
	B) Patterns and Rules	
	C) Even and Odd Numbers	
7-5 Multiplying by Multiples of Ten	A) Base Ten Blocks to Multiply a One-Digit Number and a Multiple of Ten	MAFS.3.OA.2.5, MAFS.3.OA.4.9, MAFS.3.NBT.1.3
	B) Place Value to Multiply a One-Digit Number and a Multiple of Ten	
	C) Multiplying a One-Digit Number and a Multiple of Ten	
7-6 Distributive Property to Multiply	A) Using Arrays to Model the Distributive Property	MAFS.3.OA.2.5, MAFS.3.MD.3.7.c
	B) Equal Expressions with Split Factors	
	C) Using the Distributive Property to Multiply	

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Chapter 8 Fractions

Lesson	Topic	NGSSS
8-1 Fraction Basics	A) Equal Parts	MAFS.3.NF.1.1, MAFS.3.G.1.2
	B) Parts of Fractions	
	C) Reading and Writing Fractions	
8-2 Fractions as Shaded Parts	A) Modeling Fractions with Fraction Bars	MAFS.3.NF.1.1, MAFS.3.G.1.2
	B) Unit Fractions	
8-3 Fractions on Number Lines	A) Modeling Fractions on Number Lines	MAFS.3.NF.1.1, MAFS.3.NF.1.2.a, MAFS.3.NF.1.2.b
8-4 Equivalent Fractions	A) Models to Write Equivalent Fractions	MAFS.3.NF.1.3.a, MAFS.3.NF.1.3.b, MAFS.3.NF.1.3.c
	B) Models to Simplify Fractions	
8-5 Comparing Fractions	A) Comparing Fractions with the Same Denominator	MAFS.3.NF.1.3.d
	B) Comparing Fractions with the Same Numerator	
	C) Ordering Fractions with the Same Numerator or Denominator	

Chapter 9 Measurement

Lesson	Topic	NGSSS
9-1 Inches and Feet	A) Using Inches to Measure Objects	MAFS.3.MD.2.4
	B) Using Feet to Measure Objects	
9-2 Volume and Mass	A) Estimating Metric Units of Volume	MAFS.3.MD.1.2
	B) Estimating Metric Units of Mass	
9-3 Clocks	A) Clockwise and Counterclockwise	MAFS.3.MD.1.1
	B) Telling Time on an Analog Clock	
9-4 Elapsed Time	A) Time in a Given Number of Hours and Minutes	MAFS.3.MD.1.1
	B) Time a Given Number of Hours and Minutes Age	
	C) Elapsed Time	
9-5 Money	A) Values of Sets of Mixed Coins	MAFS.2.MD.3.8.b
	B) Values of Sets of Bills and Coins	

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Chapter 10 Data

Lesson	Topic	NGSSS
10-1 Pictographs	A) Making Scaled Pictographs	MAFS.3.MD.2.3
	B) Using Scaled Pictographs to Make Tally and Frequency Tables	
	C) Reading Scaled Pictographs	
10-2 Bar Graphs	A) Using Scaled Bar Graphs to Make Tally and Frequency Tables	MAFS.3.MD.2.3
	B) Making Scaled Bar Graphs	
	C) Reading Scaled Bar Graphs	
10-3 Line Plots	A) Understanding Line Plots	MAFS.3.MD.2.4
	B) Using Line Plots to Make Tally and Frequency Tables	
	C) Making Line Plots	
	D) Reading Line Plots	

Chapter 11 Two-Dimensional Figures

Lesson	Topic	NGSSS
11-1 Attributes of Two-Dimensional Figures	A) Sides, Angles, and Vertices of Two-Dimensional Figures	MAFS.3.G.1.1
	B) Attributes of Figures Given Their Names	
	C) Identifying Figures with Given Attributes	
11-2 Quadrilaterals	A) Defining Quadrilaterals	MAFS.3.G.1.1
	B) Attributes of Rectangles, Rhombuses, and Squares	
11-3 Perimeter	A) Perimeter on a Grid	MAFS.3.MD.4.8
	B) Perimeters of Figures with All Side Lengths Given	
	C) Perimeters of Rectangles and Squares	
11-4 Area	A) Area on a Grid	MAFS.3.MD.3.5.a, MAFS.3.MD.3.5.b, MAFS.3.MD.3.6, MAFS.3.MD.3.7.a, MAFS.3.MD.3.7.b
	B) Areas of Rectangles and Squares	
11-5 Area Extensions	A) Shapes with Equal Perimeters or Areas	MAFS.3.MD.3.7.d, MAFS.3.MD.4.8
	B) Areas of Figures Composed of Rectangles and Squares	